

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	10	("20010036568" "3316167" "4719157" "5804328").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:01
L14	5974	vinyl near2 (phosphonic\$5 sulfonic\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:01
L15	4872	14 not (electrolyt\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:01
L16	1102	14 not 15	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:01
L17	1019	16 not (nafion perfluoro-sulfon\$6 perfluorosulfon\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:55
L18	83	16 not 17	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:02
L19	5	("3316167").URPN.	USPAT	OR	ON	2007/08/27 15:26
L20	814934	methacryl\$5 vinyl	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:26
L21	10103	20 near7 (sulfonat\$4 phosphonat\$)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:27
L22	19851	20 near7 (sulfonat\$4 phosphonat\$ sulfonic\$5 phosphonic\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:27
L23	8742	22 with monomer\$5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:28

## EAST Search History

L24	14	23 same (nafion perfluoro-sulfon\$6 perfluorosulfon\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:49
L25	0	23 with ((greater increas\$4 enhanc\$4) near2 (ionic protonic proton ion))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:30
L26	165	trivinylnear2 (sulfonic sulfone phosphate phosphones phosphonic carboxylate carboxylic acrylate methacrylate acrylamide methacrylamide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:48
L33	76	26 not (nafion perfluoro-sulfon\$6 perfluorosulfon\$5 proton protonic ionic electrolyt\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:43
L34	89	26 not 33.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:47
L35	925549	elastic elasticiz\$4 elastisiz\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:05
L36	910183	35 not electrolyt\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:48
L37	843467	vinyl acrylate acrylamide acrylamide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:48
L38	162366	37 near3 monomer\$5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:49
L39	51	38 same (nafion perfluoro-sulfon\$6 perfluorosulfon\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:03

## EAST Search History

L40	30	(US-20050084727-\$ or US-20050118478-\$ or US-20070055045-\$ or US-20050147859-\$).did. or (US-4116888-\$ or US-6030718-\$ or US-6218035-\$ or US-4076604-\$ or US-4166014-\$ or US-6730363-\$ or US-5403675-\$ or US-5468574-\$ or US-6103078-\$ or US-6649703-\$ or US-6878475-\$ or US-5643689-\$ or US-6872781-\$ or US-5203982-\$).did. or (JP-2000011757-\$ or JP-2002324559-\$).did. or (JP-53029291-\$ or US-4083768-\$ or JP-53060388-\$ or FR-2494702-\$ or JP-61276828-\$ or US-6090895-\$ or JP-2003082012-\$ or JP-2003217365-\$ or DE-10220818-\$ or DE-19809042-\$).did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/08/27 15:55
L41	2	"20050147859"	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/08/27 15:55
L42	0	41 and nafion	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/08/27 15:55
L43	1	41 and (nafion perfluoro-sulfon\$6 perfluorosulfon\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:00
L44	63	("20010038937" "20020045085" "20040101731" "3313783" "3737045" "3808305" "4021303" "4075093" "4187333" "4537668" "4622276" "5098985" "5211984" "5218076" "5312895" "5492996" "5599639" "5633337" "5643968" "5656386" "5674969" "6030718" "6087032" "6096369" "6110616" "6248469" "6368587" "6607856").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 15:58
L45	1584	"63" and (nafion perfluoro-sulfon\$6 perfluorosulfon\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:01
L46	8	44 and (nafion perfluoro-sulfon\$6 perfluorosulfon\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:01
L47	631	35 with 38	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:03

## EAST Search History

L48	629	47 not (fuel adj (cell battery))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:05
L49	2	47 not 48	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:04
L50	1076756	elastic elasticiz\$4 elastisiz\$4 elasticity	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:05
L51	1073106	50 not (fuel adj (cell battery))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:05
L52	3650	50 not 51	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:05
L53	565	52 and (50 with (membrane electrolyt\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:05
L54	0	53 and 48	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:06
L55	4	53 and (50 with vinyl)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 16:06
S1	9235	jsr-\$.as.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:44
S2	1004	S1 and (crosslink\$4 cross-link\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:45

## EAST Search History

S3	707	S2 and groups	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:45
S4	403	S2 and groups!	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:45
S5	351	S4 not (electrolyt\$ polyelectrolyt\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:45
S6	52	S4 not S5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:48
S7	1	2003-700373.NRAN.	DERWENT	OR	ON	2007/08/23 17:50
S8	742876	(MORE TWO THREE "2" "3" PLURAL\$4 MULTIPLE MULTIPLICITY MULTIFUNCTIONAL\$5 MULTI-FUNCTIONAL\$5 POLYFUNCTIONAL\$5 POLY-FUNCTIONAL\$5) NEAR4 (GROUPS! UNSATURAT\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:51
S9	815501	(MORE TWO THREE "2" "3" PLURAL\$4 MULTIPLE MULTIPLICITY MULTIFUNCTIONAL\$5 MULTI-FUNCTIONAL\$5 POLYFUNCTIONAL\$5 POLY-FUNCTIONAL\$5) NEAR4 (GROUPS! UNSATURAT\$4 VINYL (ETHYLENICALLY ADJ UNSATURAT\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 17:53
S10	9240	S9 same (crosslink\$4 cross-link\$4 (cross adj link\$4))	EPO; JPO; DERWENT	OR	ON	2007/08/23 18:00
S11	9050	S10 not (electrolyt\$4 polyelectrolyt\$4)	EPO; JPO; DERWENT	OR	ON	2007/08/23 18:00
S12	190	S10 not S11	EPO; JPO; DERWENT	OR	ON	2007/08/23 17:54
S13	535805	divinyl polyvinyl trivinyl trimethacryl\$6 dimethacryl\$6 bimethacryl\$6 tri-methacryl\$6 di-methacryl\$6 bi-methacryl\$6 polymethacryl\$6 poly-methacryl\$6 dvb divinylbenzene "divinyl benzene"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 19:27
S14	10049	S13 same (crosslink\$4 cross-link\$4 (cross adj link\$4))	EPO; JPO; DERWENT	OR	ON	2007/08/23 19:32
S15	9759	S14 not (electrolyt\$4 polyelectrolyt\$4)	EPO; JPO; DERWENT	OR	ON	2007/08/23 19:32

## EAST Search History

S16	290	S14 NOT S15	EPO; JPO; DERWENT	OR	ON	2007/08/23 18:00
S17	460	S16 S12	EPO; JPO; DERWENT	OR	ON	2007/08/23 18:00
S18	1	1978-31300A.NRAN.	DERWENT	OR	ON	2007/08/23 18:58
S19	1	1982-57747E.NRAN.	DERWENT	OR	ON	2007/08/23 19:15
S20	1	"6090895".PN.	DERWENT	OR	ON	2007/08/23 19:15
S21	2	"6090895".PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT ; IBM_TDB	OR	ON	2007/08/23 19:15
S22	31	("4468503"   "4879338"   "5256181"   "5414117"   "5438082"   "5459228"   "5468574"   "5530066"   "5627292"   "5691081"   "5721328"   "5741408").PN. OR ("6090895").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:15
S23	858	S22 AND13	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 19:27
S24	7	S22 AND S13	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/23 19:27
S25	59124	S13 same (crosslink\$4 cross-link\$4 (cross adj link\$4))	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:32
S26	50955	S25 not (electrolyt\$4 polyelectrolyt\$4)	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:32
S27	8169	S25 NOT S26	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:32
S28	7644	S27 NOT (FUEL ADJ (CELL BATTERY))	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:33
S29	525	S27 NOT S28	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:33
S30	525	S29 NOT S17	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:33

# EAST Search History

S31	223	("2852554"   "3498844"   "3507702"   "3528858"   "3623913"   "3808534"   "3823358"   "3964930"   "3969145"   "3975913"   "4024036"   "4035551"   "4130693"   "4142024"   "4178418"   "4185131"   "4192906"   "4219443"   "4276355"   "4287232"   "4435252"   "4463065"   "4469579"   "4476198"   "4478917"   "4500612"   "4510211"   "4562124"   "4598028"   "4629537"   "4647359"   "4661411"   "4670702"   "4686158"   "4702971"   "4724191"   "4728584"   "4749632"   "4755376"   "4767518"   "4769297"   "4770955"   "4795536"   "4797185"   "4797190"   "4804592"   "4816036"   "4818637"   "4818735"   "4824741"   "4826741"   "4826742"   "4847172"   "4849253"   "4851303"   "4863813"   "4876115"   "4883497"   "4894355"   "4927793"   "4943494"   "4948680"   "4973531"   "4985315"   "4994331"   "5035961"   "5035962"   "5037525"   "5047298"   "5049459"   "5059497"   "5069987"   "5084144"   "5106706"   "5114803"   "5122425"   "5130210"   "5132193"   "5143801"   "5149601"   "5154987"   "5162167"   "5164060"   "5169731"   "5176967"   "5186806"   "5187025"   "5188910"   "5190834"   "5192627"   "5200278"   "5200279"   "5213911"   "5217822"   "5219673"   "5223353"   "5232794"   "5234722"   "5234777"   "5242764"   "5244753"   "5246792"   "5248566"   "5252410"   "5256499"   "5262249"   "5264299"   "5266419"   "5266421"   "5270131"   "5272017"   "5273838"   "5279906"   "5281490"   "5286579"   "5290323"   "5290642"   "5292599"   "5292600"   "5298235"   "5302269"   "5304430"   "5306574"   "5308712"   "5312700").PN. OR ("5316869"   "5316871"   "5330859"   "5330860"   "5336570"   "5338622"   "5342704"   "5342705"   "5344721"   "5346780"   "5350641"   "5350643"   "5354626"   "5356728"   "5356730"   "5358620"   "5358735"   "5358799"   "5364711"   "5366818"   "5368951"   "5372895"   "5372896"   "5385792"   "5395704"   "5395705"   "5403461"   "5403675"   "5407758"   "5449697"   "5470671"   "5500292"   "5523175"   "5523177"   "5525436"   "5532072"   "5534362"   "5547777"   "5561202"   "5607785"   "5624769"   "5639516"   "5654109"   "5707755").PN. OR ("6030718").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:41
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## EAST Search History

S32	25375	NAFION "ethanesulfonyl fluoride" PERFLUORO PERFLUOROSULFON\$6	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:41
S33	60	S31 AND S32	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:42
S34	1	"6030718".PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:42
S35	0	S34 AND S32	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:43
S36	295	S29 NOT S32	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/23 19:43
S37	230	S29 NOT S36	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 09:09
S38	1	"5605770".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 09:26
S39	2	"53029291"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 09:39
S40	14991	trimethacryl\$4 tri-methacryl\$4 triviny	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 09:40
S41	14931	S40 not (perfluoro-sulfon\$4 perfluorosulfon\$4 nafion)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 09:47
S42	60	S40 not S41	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 09:47
S43	3966	monomer near5 (sufonic\$5 sulfonat\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 09:47
S44	3789	S43 not (perfluoro-sulfon\$4 perfluorosulfon\$4 nafion)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:02



## EAST Search History

S45	177	S43 not S44	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 09:47
S46	21	("4468503"   "4879338"   "5256181"   "5414117"   "5438082"   "5459228"   "5468574"   "5530066"   "5627292"   "5691081"   "5721328"   "5741408"   "6090895").PN. OR ("6649703").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 10:05
S47	69	521/27.ccls. and S43	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 10:06
S48	28781	(phosphonic adj acid)	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 10:07
S49	1823	S48 near2 (vinyl)	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 10:07
S50	1791	S49 not (fuel adj cell\$1)	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 10:09
S51	32	S49 not S50	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 10:08
S52	27954	vinyl near1 (acid\$1 phosphonic sulfonic carboxylic)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:05
S53	27793	S52 not (fuel adj cell\$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT ; IBM_TDB	OR	ON	2007/08/27 10:09
S54	161	S52 not S53	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT ; IBM_TDB	OR	ON	2007/08/27 10:10
S55	23	("3265536"   "4024036"   "4089816"   "4179491"   "4306774"   "4380575"   "4594297"   "4664761"   "5272017"   "5316871"   "5425865").PN. OR ("5643689").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 10:18

## EAST Search History

S56	49463	vinyl near2 (acid\$1 phosphonic sulfonic carboxylic)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:02
S57	2	S54 SAME (perfluoro-sulfon\$4 perfluorosulfon\$4 nafion)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:03
S58	31	S56 SAME (perfluoro-sulfon\$4 perfluorosulfon\$4 nafion)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:07
S59	50111	vinyl near2 (acid acidified sulfonic\$5 sulfonat\$4 phosphon\$6)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:06
S60	71	S59 SAME (perfluoro-sulfon\$4 perfluorosulfon\$4 nafion)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:07
S61	40	S60 not S58	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:08
S62	7969	S59 near5 monomer\$5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:08
S63	7812	S62 not ((electrochemical fuel) adj (cell battery))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:08
S64	4121	S62 not "26"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:08
S65	157	S62 not S63	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:09

## EAST Search History

S66	156	S65 not S61	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:09
S67	23	("3265536"   "4024036"   "4089816"   "4179491"   "4306774"   "4380575"   "4594297"   "4664761"   "5272017"   "5316871"   "5425865").PN. OR ("5643689").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/27 11:13
S68	1361	monomer\$2 with (ionomer proton\$3 nafion pefluorosulfon\$5 perfluoro-sulfon\$5) with (composite mixture)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 11:14
S69	61	S68 and (monomer\$4 near7 S59)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 12:38
S70	15	"893165"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 12:38
S71	2	"6368587".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/27 14:24